In the Abstract

Replace the paragraph at page 15, lines 2 to 8 with the following paragraph:

A magnetic recording head for reading and writing information with respect to a rotating disk medium includes a pad having a working surface which contacts the recording medium. The pad has a leading edge and a trailing edge with the leading edge facing in the general direction of relative motion between the head and the medium. The leading edge has a narrower width than the trailing edge so as to reduce the effect of debris accumulation at the disk-head interface. The narrower leading edge allows the head to deflect oncoming debris as the head traverses the surface of the rotating magnetic medium.

In the Specification

Insert the following paragraph at page 2, line 3:

CROSS-REFERENCE TO RELATED APPLICATIONS

This application is a divisional of U.S. Application Serial No. 09/491,284, filed January 26, 2000, which is a continuation of U.S. Application Serial No. 08/161,234, filed December 2, 1993, which is a continuation-in-part of U.S. Application Serial No. 07/992,270, filed December 14, 1992 (abandoned).

Replace the paragraph at 2, lines 12 to 22 with the following paragraph:

Researchers working in the magnetic recording industry have recently begun focusing their efforts on developing thin film heads having a so-called integrated head/flexure/conductor structure for reading and writing of information to a disk medium. For example, such a magnetic head structure is disclosed in U.S. Patent No. 5,041,932. In this type of recording technology, a magnetic pole element is embedded within the body of the magnetic recording head. Advanced performance is achieved in these types of magnetic recording heads by including a contact pad which is in non-catastrophic, continuous sliding contact with the surface of the recording medium. The contact pad includes a working surface portion which is extremely small -- on the order or about 20 X

30 microns. The working surface portion of the contact pad actually touches the disk during normal operation.

Replace the paragraph at page 3, line 25 to page 4, line 13 with the following paragraph:

It should be understood that in the conventional type of magnetic recording head which flies above the surface of the disk (i.e., near-contact recording system), the working surface which touches the disk normally comprises two or more rails having flat bottom surfaces. For example, sliders of this type are disclosed in U.S. Patent Nos. 4,870,619; 4,961,121; 4,926,274; and 4,709,284. To increase the hydrodynamic lifting force, many sliders have a front taper as described in U.S. Patent No. 4,939,603. Other designs include a sloping working surface. In either case, the taper and/or slope are in the vertical direction; that is, perpendicular to the disk surface. Other prior art designs include the so-called slider camber and crown -- characterized by their vertical slopes in both the longitudinal and cross directions, respectively. This latter type of design is usually selected based on considerations of smaller contact area so as to reduce the problem of stiction. The drawbacks to these designs however include the requirement for a higher take-off velocity and an increased wear rate.

Replace the paragraph at page 8, lines 4 to 13 with the following paragraph:

Figure 2 illustrates another type of read/write head structure which also suffers from the problem of excessive debris accumulation at the head-disk interface. The integrated read/write head/flexure/conductor structure 20 shown in Figure 2 comprises an elongated, dielectric flexure body 22 having a pad 21 disposed at one end. A magnetic pole element is embedded within pad 21 to provide flux-coupling to the magnetic underlayer of the recording medium. Pad 21 also includes a working surface 23 which is in substantially continuous sliding contact with the disk recording medium during read/write operations. The area of the working surface is usually made to be very small

with a typical recording head of this type having a pad area of approximately 30 X 20 microns.

Replace the paragraph at page 9, lines 10 to 20 with the following paragraph:

Although Figures 3A and 3B show the entire slider being shaped in an overall triangular or V-shape, it should be understood that in some cases only the front portion or leading section of the contact pad structure may be shaped in this way. In other words, the essential characteristic of the invention is that the leading edge of the slider be shaped so as to push away debris as the head slides across the surface of the recording medium. Note that the relative direction of motion of the recording medium is shown in Figures 3A and 3B by arrow 35. Any debris present on the surface of the recording medium is diverted away from the slider-disk interface along the sides of slider 30 in accordance with the present invention. Thus, the shape of the contact pad or slider provides a means for reducing the amount of debris being brought into the friction zone by a hydrodynamic flow.

Replace the paragraph at page 9, line 21 to page 10, line 5 with the following paragraph:

Figures 4A and 4B show an alternative embodiment of the present invention in which contact pad 40 includes a leading edge 41 which has a parabolic or U-shape. Trailing edge 43 remains straight. The direction of relative motion between the contact pad and the medium is shown in Figures 4A and 4B by arrow 45. Once again, it is appreciated that the parabolic or U-shaped leading edge faces the direction of sliding. Note also that it makes little difference whether the curved leading edge is actually "U"-shaped, parabolic, hyperbolic, or described by some other mathematical function. It should also be understood that in the embodiments of Figures 3A, 3B, 4A, and 4B, it may be desirable to taper the leading edges in order to improve the sliding and/or flying characteristics of the head.

Replace the paragraph at page 10, line 25 to page 11, line 6 with the following paragraph:

Figures 6A-6C illustrate other alternative embodiments of the present invention wherein the magnetic recording head flies above the surface of the disk. Each of the sliders of Figures 6A-6C is shown having a plurality of rail members, with each rail member providing an air-bearing surface that is approximately parallel to the surface of the disk. In each case, the leading edges of the rail members is shaped so as to reduce the problem of debris accumulation at the disk-slider interface in a manner consistent with the explanation above.

Replace the paragraph at page 11, lines 16 to 21 with the following paragraph:

Similarly, in Figure 6B, slider 70 includes rail members 72 each having a leading edge 75 and trailing edge 74. In the case of slider 70, the leading edge portion of the rail members are again shaped to have a "knife-edge" profile, wherein the leading edge 75 is again narrower than the trailing edge 74. The only difference between the embodiment in Figure 6A and that shown in Figure 6B is that in Figure 6B, the narrower leading edge is symmetrical about the center of the rail.

Replace the paragraph at page 11, line 22 to page 12, line 3 with the following paragraph:

Figure 6C shows a third variation of the basic concept of the present invention wherein slider 80 includes rail members 82 each having a leading edge 85 which is narrower than trailing edge 84. In the case of slider 80, leading edge 85 is "U-shaped" to deflect oncoming debris thereby preventing it from accumulating at the slider-disk interface. It is appreciated that the leading edge 85 of rail members 82 may also be parabolic, hyperbolic, or some other curved surface which can be represented by a mathematical function.